

Web Design and HTML - PDF Note - computeroperatorexam.com

7.1 — Web Page and CMS

→ [[Q-Web-Page-CMS-Introduction]]

Term	Definition
Web Page	A document displayed in a web browser, built using HTML, CSS, JavaScript
Website	Collection of related web pages under a single domain
Static Website	Fixed content; same for every visitor; no server-side processing; uses HTML/CSS only
Dynamic Website	Content changes based on user, time, or database; uses PHP, ASP.NET , JavaScript
Web Browser	Software to access web pages (Chrome, Firefox, Edge, Safari)
Search Engine	Tool to find web pages (Google, Bing, Yahoo)
CMS	Content Management System — software to create and manage digital content without coding

CMS Key Facts:

- Examples: WordPress (most popular, 43% of all websites), Joomla, Drupal, Wix, Blogger
- CMS components: Content Delivery Application (CDA) + Content Management Application (CMA)
- Advantages: No coding needed, multi-user, templates, SEO tools, plugins
- PSC exam: MD Q98 — "What do you understand by CMS? What is its use?"

7.2 — HTML: Document Structure and Tags

→ [[Q-HTML-Document-Structure-Tags]] | [[Q-HTML-Working-Text-Hyperlinks-Images-Lists-Forms-Tables-Frames]]

HTML = HyperText Markup Language — language for creating web pages

Basic HTML Skeleton

```
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    Page content here
  </body>
</html>
```

Essential Tag Reference

Category	Tag	Purpose
Structure	<code><html></code> <code><head></code> <code><body></code>	Root document structure
Headings	<code><h1></code> to <code><h6></code>	Largest (h1) to smallest (h6)
Text	<code><p></code> <code>
</code> <code><hr></code>	Paragraph, line break, horizontal rule
Formatting	<code></code> <code><i></code> <code><u></code> <code></code> <code></code>	Bold, italic, underline, strong, emphasis
Preformatted	<code><pre></code>	Display text as-is (preserves spaces/breaks)
Link	<code></code>	Hyperlink
Image	<code></code>	Image; <code>alt</code> = alternate text if image fails
Lists	<code></code> <code></code> <code></code> <code><dl></code> <code><dt></code> <code><dd></code>	Unordered, ordered, definition lists
Table	<code><table></code> <code><tr></code> <code><td></code> <code><th></code>	Table, row, data cell, header cell

Category	Tag	Purpose
Form	<code><form></code> <code><input></code> <code><select></code> <code><textarea></code>	User input elements
Frame	<code><frameset></code> <code><frame></code> <code><iframe></code>	Embed another page within a page
Semantic (HTML5)	<code><header></code> <code><nav></code> <code><main></code> <code><footer></code> <code><article></code> <code><section></code>	Structural meaning

Key Attributes

- `href` — URL for links
- `src` — Source file for images
- `alt` — Alternate text for images (accessibility)
- `border` , `cellpadding` , `cellspacing` — Table attributes
 - **Cell Padding** = space between cell content and cell border
 - **Cell Spacing** = space between adjacent cells
- `action` , `method` — Form attributes (where/how data is sent)

Color Codes (MD Q101)

Color	Hex Code
Black	<code>#000000</code>
White	<code>#FFFFFF</code>
Red	<code>#FF0000</code>
Green	<code>#00FF00</code>
Blue	<code>#0000FF</code>

HTML Comments

```
<!-- This is a comment – not displayed in browser -->
```

Lists Quick Reference

```

<!-- Unordered -->
<ul><li>Item</li></ul>

<!-- Ordered -->
<ol><li>Item</li></ol>

<!-- Definition -->
<dl><dt>Term</dt><dd>Definition</dd></dl>

```

Frames vs iFrames

- **Frame** (`<frameset>`) = divides browser window into multiple sections (deprecated in HTML5)
- **iFrame** (`<iframe>`) = embeds an external page inside a page (still used — e.g., YouTube embeds)
- **Why frames useful?** Navigation remains visible while content changes; reusable layouts

7.3 — CSS, RSS and Social Networking

→ [[Q-CSS-RSS-Social-Networking]]

CSS (Cascading Style Sheets)

Definition: CSS controls the visual presentation (style) of HTML documents — colors, fonts, layout, spacing.

Type	Location	Syntax	Priority
Inline	Inside HTML tag	<code><p style="color:red;"></code>	Highest
Internal	Inside <code><style></code> in <code><head></code>	<code><style> p { color: red; }</style></code>	Medium
External	Separate <code>.css</code> file	<code><link rel="stylesheet" href="style.css"></code>	Lowest

CSS Benefits: Separation of content and style, consistent look across pages, faster loading, responsive design, reusability.

Responsive Design: CSS adjusts layout for different screen sizes using media queries.

RSS (Really Simple Syndication / Rich Site Summary)

Feature	Detail
Definition	Web feed format delivering frequently updated content
File format	XML-based <code>.rss</code> file
Used for	News feeds, blogs, podcasts — subscribe without visiting site
How it works	Website publishes RSS feed → user's RSS reader fetches updates automatically

Key Web Terms

- **URL (Uniform Resource Locator)** — Web address (e.g., <https://www.example.com>)
- **HTTP** — Protocol for transferring web pages; HTTPS = secure version
- **Domain Name** — Human-readable website address; DNS translates to IP address
- **IP Address** — Numerical address of a device on a network

7.4 — Social Media and Governance

→ [[Q-Social-Media-Governance]]

Social Media: Online platforms allowing users to create, share, and interact with content.

Types of Social Media Platforms

Type	Examples
Social Networks	Facebook, LinkedIn
Microblogging	Twitter/X
Photo/Video Sharing	Instagram, YouTube, TikTok
Professional	LinkedIn

Type	Examples
Messaging	WhatsApp, Telegram, Messenger
Blogging	WordPress, Blogger
Collaborative	Wikipedia

Social Media in Governance (E-Governance)

- **Citizens → Government:** Feedback, complaints, petitions
- **Government → Citizens:** Public announcements, alerts, policy communication
- **Applications:** Health campaigns, disaster alerts, education, transparency
- **Nepal context:** Government uses Facebook/Twitter for official communications

Managing Social Media (7.4.4)

- Create official verified accounts
- Maintain consistent tone and branding
- Post regularly and respond to comments
- Monitor for misinformation
- Follow government social media guidelines

Benefits of Social Media in Governance

- Direct communication with citizens
- Cost-effective public outreach
- Real-time crisis communication
- Increased transparency and accountability
- Citizen participation in decision-making

Challenges

- Misinformation and fake news
- Privacy and security risks

- Digital divide (not all citizens use social media)
- Resource requirement for management

Exam Frequency Table — Unit 7

Topic	Q File	Key Questions	Source
Web Page & CMS	[[Q-Web-Page-CMS-Introduction]]	What is CMS? Static vs Dynamic website?	MD Q98, LQ Set 6 B
HTML structure	[[Q-HTML-Document-Structure-Tags]]	Basic structure; tag types; comments	MD Q92, Q93, Q100
Color codes	[[Q-HTML-Document-Structure-Tags]]	Hex codes for Black/White/Red/Green/Blue	MD Q101
HTML elements	[[Q-HTML-Working-Text-Hyperlinks-Images-Lists-Forms-Tables-Frames]]	Lists, tables, forms, frames	MD Q94–Q99, Q102
<code><pre></code> tag	[[Q-HTML-Document-Structure-Tags]]	Display text without formatting	MD Q104
CSS	[[Q-CSS-RSS-Social-Networking]]	What is CSS? Benefits? Types?	MD Q103
RSS	[[Q-CSS-RSS-Social-Networking]]	Define RSS; how used in web dev	Syllabus 7.3
Social Media	[[Q-Social-Media-Governance]]	Use in governance; platforms; managing	SQ 7.4